A Real Time Research Project/ Societal Related Project Report

On

Resume Builder Website

Submitted in fulfillment of the requirements for the award of the

Bachelor of Technology

In

Department of Computer Science and Engineering

By

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2023-2024

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CERTIFICATE

This is to certify that the Real Time Research Project/ Societal Related Project entitled "**Resume Builder Website**" is submitted by **G Vishnu Vardhan (22241A050A), A Revanth(22241A05Y6), K Nikhil Reddy(22241A058A), K Govardhan(22241A059A)** in fulfillment of the award of a degree in BACHELOR OF TECHNOLOGY in Computer Science and Engineering during the academic year **2023-2024.**

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ACKNOWLEDGEMENT

Many people helped us directly and indirectly to complete our project successfully. We would like to take this opportunity to thank one and all. First, we wish to express our deep gratitude to our internal guide **B. Geetha Kumari**, **Assistant Professor**, Department of CSE for his/her support in the completion of our project report. We wish to express our honest and sincere thanks to **Ms. KVSL Harika** for coordinating in conducting the project reviews, **Dr. B. Sankara Babu, HOD,** Department of CSE for providing resources, and to the principal **Dr. J. Praveen** for providing the facilities to complete our Real Time Research Project/ Societal Related Project. We would like to thank all our faculty and friends for their help and constructive criticism during the project completion phase. Finally, we are very much indebted to our parents for their moral support and encouragement to achieve goals.

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DECLARATION

We hereby declare that the Real Time Research Project/ Societal Related Project entitled "**Resume Builder Website** " is the work done during the period from **2023-2024** and is submitted in the fulfillment of the requirements for the award of the degree of Bachelor of Technology in Computer Science and Engineering from **Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous under Jawaharlal Nehru Technology University, Hyderabad).** The results embodied in this project have not been submitted to any other university or Institution for the award of any degree or diploma.

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ABSTRACT

In today's competitive job market, a well-crafted resume is a crucial tool for standing out amidst a sea of applicants. Recognizing this importance, our project "Resume Builder Website" offers a simple and effective solution for individuals to create impressive resumes tailored to their unique skills, experiences and job preferences. Our project offers a user-friendly interface from start to finish. Through a registration and login process, users gain access to an intuitive form where they can input personal, professional and skill-related information. It ensures that all essential information is captured accurately and efficiently to provide a perfect resume.

Users have the freedom to choose from a selection of professionally designed layouts which allows them to showcase their personality and career aspirations. After completing the resume, users can easily download it in various formats according to their requirements. Our project aims to empower individuals in their job search journey by providing them with the tools needed to create standout resumes. By combining simplicity, customization and accessibility, our platform equips individuals with the means to make a lasting impression on potential employers in today's competitive job market.

Chapter 1

INTRODUCTION

Resume builders have significantly transformed the development and presentation of professional profiles by job seekers. It offers a broad collection of tools and features that enhance the overall view of applications and facilitate the process of writing resumes. The large number of templates available, each one different for a specific sector and job type, is essential in its functionality because it gives the user a head start that gives an idea of current design trends and standards being followed in different industries. These aid the user in including important parts like professional objectives, work experience, education, skills, and accomplishments logically and effectively. They are not just visually attractive but also structurally sound.

Customization options are essential insofar as they allow individuals to design their résumés to reflect their unique talents and professional goals. Users can change the order, fonts, colors, and layouts to produce a well-defined document showcasing their qualifications. In addition, there are editing facilities available in real-time, ensuring that there is instant feedback on language, spelling, and formatting errors, meaning that resumes are flawless and error-free before submission. This real-time coaching elevates the overall professionalism and content quality of the resume.

It is essential not to forget that resume builders are only tools, and they do not replace the essence of deep reflection or the solid skills used to write resumes. The onus is on the user to input all relevant details honestly and to tailor any content that the tool creates to be suitable for every individual job application, however much formatting and guidance the tool provides. Using strong action verbs and specific results in numerical terms to emphasize specific achievements is vital to attracting notice. Plus, some resume builders don't cater to highly specialized positions or those in niche markets, so the editing and proofreading steps remain intact. Nonetheless, resume builders are still an efficient job search tool for job seekers of any experience level due to an overall good user experience—easy and fast with excellent results in creating a sound application package.

With the Internet, there are way too many options for employment; therefore, a great CV is

more important now than ever. Thus, a resume becomes an essentially important tool in the procedure of job application as it will stand out as the central reference point between the candidate and employer. It is an effective and well-organized CV that gives a candidate an edge over the vast crowd of hopefuls who aspire for a job in the competitive job market. Simply put, a resume is a page that contains you. It shows your skills, education, experience, past career history, details of courses undertaken, and so on. But a resume means much more. Your resume is a link- a connecting link- between you and the employer. Because of this, a resume should never be considered of less value. I will illustrate through this scenario: when a candidate has excellent skills but overlooks presenting those properly in their resume, they may get rejected in the first step. But at the same time, it's crucial to have some knowledge in that arena to get accepted into a job. You always need a good, well-organized resume to move forward. Almost always, the first round is resume shortlisting, and many students do not make it through this round. The explanation is simple: poor format on the resume. Recruiters do not have ample time to go through each line meticulously—an individual needs, therefore, to have a well-structured one-page resume. This will be followed by a desire on the part of the job seeker to apply for a job.

The resume builders presently in place have made the process much easier, but a few hiccups in the current system might disadvantage applicants. Most of the traditional ones are not very customization-friendly. It is all too common that these resume generators often require users to adopt rigid templates that may not correctly emphasize their unique capabilities and experiences, resulting in ineffective generic resumes in highly competitive employment markets. Some of the platforms even suffer from usability and complexity problems, making it cumbersome and irritating to deal with for not-so-tech-savvy users. A lack of templates for some categories of jobs or industries is a further disadvantage that does not allow job seekers to showcase their qualifications correctly. Finally, excessive reliance on templates may impede individuality and innovation, thus making it difficult for job seekers to successfully showcase unique talents and accomplishments. These limitations mention the direction of enhancements needed in resume builders that should have advanced customization capabilities, should include user-friendly interfaces, and should cater to the needs of a modern job seeker.

We give details on a Resume builder that is a "Resume Builder Website" designed with

attributes intended to cater to the needs of job seekers with vast information and personalized guidance, keeping challenges in mind as above. A resume has been crafted beautifully, and it is point-to-point; you can put in text, and it will automatically fit the information into the provided template. You can also post your resume on portals (like LinkedIn) to get a job, which is also clearly viewable in many formats, and any user may easily understand how to build his resume simply.

Chapter 2
System Requirements

2.1 Software Requirements:

2.1.2 Web Technologies

2.1.2.1 HTML (Hyper Text Markup Language)

The common markup language used to create the content and structure of online pages and web applications is called HTML. To specify the structure and elements of a web page, it makes use of several elements, including headings, paragraphs, forms, buttons, and links. Every HTML element, which is surrounded by opening and closing tags, represents a distinct portion of the content, such as text, graphics, or interactive features.

The forest fire prediction web application's user interface is primarily made with HTML. It outlines the composition and design of web pages, enabling programmers to efficiently arrange and display data. Input forms that allow users to contribute data, show prediction results, and provide more project details are designed using HTML elements. Developers may guarantee that their material is accessible and compatible with a variety of web browsers and devices by using HTML to structure it. This allows consumers to interact with the application without any difficulties.

2.1.2.2 CSS (Cascading Style Sheets)

To improve the online application for forest fire prediction's appearance and usability, CSS is used. It specifies how HTML elements should appear visually, including how they should be aligned, spaced, colored, and typeset.

With CSS styles, designers can produce aesthetically pleasing and flexible designs that adjust to various screen sizes and devices, guaranteeing the best possible readability and usefulness for consumers. Responsive design concepts are implemented using CSS techniques like media queries, which allow the web application to change its layout and appearance according to the screen size and orientation of the device.

2.1.3 Integrated Development Environments (IDEs)

2.1.3.1 Virtual Studio Code (VSCode)

The well-known source code editor VSCode was made by Microsoft. It is very adjustable, free, and open-source. It has a ton of features made to increase the effectiveness of coding. Among the features are syntax highlighting, code completion, debugging help, Git integration, and a large ecosystem of extensions for additional functionalities.

With its comprehensive integrated development environment (IDE) that supports both front-end and back-end operations, Visual Studio Code (VS Code) is an incredibly efficient tool for full-stack web development. Its vast collection of extensions, which boost coding efficiency with features like syntax highlighting, code formatting, and debugging capabilities, demonstrates its adaptability. With dedicated plugins, VS Code provides comprehensive front-end development support for HTML, CSS, and JavaScript, as well as frameworks like Angular and React.js. With features like the Live Server extension for instant browser preview and Emmet for swift HTML and CSS compilation, it speeds up development. .With its extensive backend support for server-side languages like Node.js, Python, Ruby, and Java, as well as its integrated debugging tools and terminal interaction, Visual Studio Code facilitates effective code execution and maintenance. Version control activities are made possible immediately within the editor by its smooth Git integration, and team members can collaborate in real time thanks to addons like Live Share. With its rich extension marketplace, intuitive user interface, and vibrant community, Visual Studio Code continues to be a top pick for developers who want to optimize their workflow and produce scalable, reliable web apps that run on all major browsers.

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Hardware Requirements

- Processor – i3 and above
- Memory – 4GB RAM
- Operating System like – windows OS, mac OS, Linux
- Input devices – keyboard, mouse
- Output devices – Monitor, CPU

Chapter 3

LITERATURE SURVEY

1) Resume Builder Application

Authors: Shreekanth Marapaka, Ms Shewta Ramteke

Published Year: March 2021

Observations:

- Professional Email Address: Resumes with professionals or school email address are rated more favorably by HR professionals, suggesting the importance of using professionals, suggesting the importance of using professional email addresses on resume
- Preference for Career Objectives: Campus recruiters prefer a career objective over a job objective or a combined career and objective, highlighting its importance for a favorable evaluation.
- Relevance Ranking Algorithm: The application uses a relevance ranking algorithm to rank resumes based on required skills, work experience and unique matching skills, favoring candidates whose profiles closely match job requirements.

Shortcomings:

- Manual Entry Dependency: Job searching websites rely heavily on manually entered search queries and similarity metrics, which are not up-to-date with current computing and AI advancement.
- Limited Research on Resume Objectives: More conclusive research is needed to determine the effectiveness of including career objectives, job objectives or combined objectives in resumes considering technological advancements since earlier studies.

2) Resume Builder – A web application for creating a resume.

Authors: Arnav Kumar, Ashu Kumar, Rishabh Mishra

Published Year: Apr 2022

Observations:

- User-Friendly Interface: The application provides a user-friendly interface that simplifies the task of creating a resume, making it accessible even to the users who are not well-versed in resume writing.
- Structured Resume Creation: The system guides users through the resume creation process by requiring input in predefined fields (personal information, work experience etc,) ensuring that all necessary information is included in a well-structured format.
- Storage and Accessibility: The application allows users to store their resumes for longer periods with easy access and manipulation, addressing the need for secure and easily retrievable data storage.

Shortcomings:

- Outdated Search Technology: Job searching websites use information and data retrieval techniques that depend on manually entered search queries and some advanced similarity metrics. These techniques have not kept pace with rapid advancements in computing and machine intelligence.
- Dependency on Manual Input: For resume creation we need to the data manually which can be time taking and cumbersome for users who are not familiar with what constitutes a good resume.

3) Full Stack Web Based application: Online Resume Builder

Authors: Sushant Kumar, Sarthak Attri, Neelendra Shukla

Published Year: May 2022

Observations:

- Automated and Efficient: By automating the resume-building process, the technology reduces the need for human data entry and increases efficiency.
- User-friendly: The application is made to be as simple to use as possible, and as it doesn't require any formal expertise, users may quickly and easily write resumes.
- Customization: Depending on their needs, users can alter the biographical information, employment history, and skills parts of their resumes.

- Data Integrity and Security: It offers safe data storage and guarantees data accuracy by sending error alerts for erroneous entries.

Shortcomings:

- Internet Dependency: Requires a stable internet connection, which may be limited in places with low access.
- Data Privacy Concerns: There may be security and privacy risks associated with storing personal data online.
- technical Issues: The user experience may be impacted by software defects and other technological issues.
- Learning Curve: Although the system is designed to be user-friendly, new users may require some time to become acquainted with it.
- Limited Flexibility: Couldn't support very customized or complex resume forms.

4) RESUME BUILDER- A WEB APPLICATION FOR CREATING A RESUME

Authors: Swapnil Ashok Chawan, Yukta Mahendra Lungase, Varsha Shivaji Masagar, Harshad Anil Parab.

Published Year: December 2023.

Observations:

- User-Friendly Design: Because of the system's ease of use, users may create and format their resumes without assistance.
- Error Reduction: By minimizing data entry errors and providing error messages for invalid data entries, the online resume builder reduces errors.
- Efficiency: The system makes it possible to quickly create, update, and retrieve resumes, which saves time and cuts down on paperwork.
- Digital Storage options: Since all data is kept electronically, it may be retrieved instantly and redundantly.
- Professional Result: Users can make resumes in a standard format that is helpful for both new hires and seasoned professionals.

Shortcomings:

- Manual Processes in the Current System: The proposed system seeks to replace the labor-intensive and repetitive manual resume-building procedure, which now exists.
- Minimal Personalization: Although the system automates a lot of tasks, there may still be certain customization choices unavailable for requirements specific to resumes.
- Reliance on Digital Literacy: To utilize the system efficiently, users must possess a basic level of digital literacy, which may be a hurdle for some.
- Possible Concerns Regarding Data Privacy: If personal data is stored electronically and is not adequately secured, there is always a chance of data breaches.
- Incompatibility with Non-Windows OS: Despite being indicated as compatible with Windows, there is no information provided regarding the system's functionality on other operating systems, which may restrict its usability.

5) Design and implementation of a cloud based resume creation applet.

Authors: Shugang Liu, Danqing Liu, Yonghang Zhang.

Published Year: January 2023.

Observations:

- Efficacy in Creation: The applet is designed to simplify and expedite the process of creating professional resumes.
- Simple to Use: The applet is easy to use, doesn't require registration, and lets you quickly update and modify resumes.
- Personalization: Applicants can choose from a range of templates and alter their resumes to suit their needs and the job posting's specifications.
- Cloud Integration: The applet makes sure data is securely kept and readily available by utilizing cloud services, which improves user experience overall.

Shortcomings:

- Partial Information: A lot of college students' resumes frequently exclude important information, which can hurt their attempts to find employment.
- Lack of Focus: Oftentimes, resumes overlook to highlight the most important details, which makes for a less powerful presentation.

- Unreasonable Design: CVs with a poor layout can undercut a candidate's qualifications and decrease the likelihood that they will make a positive first impression.
- Problems with Conciseness: A lot of resumes are not targeted and are excessively lengthy, which can make recruiters not want to read them.

6) Rezume- A Web-based resume builder system for university students.

Authors: Ayush Arora.

Published Year: December 2021

Observations:

- Creating attractive and ATS-friendly resumes for recent graduates appears to be emphasized by the project.
- The goal is to make the process of creating resumes for students easier by offering automatic checks and customized templates.
- A organized approach to resume building is shown by the adoption of the JSON Resume standard and the emphasis on improving the user experience.

Shortcomings:

- Absence of information on the features and capabilities of the suggested web-based resume builder system.
- There isn't much talk about how the project tackles the difficulties recent graduates have writing strong resumes.
- The given timeline is devoid of precise tasks and milestones pertaining to the project's progress.
- The sections that are available concentrate more on background data and overarching ideas than on project-specific details.

7) Resume Parser Using Natural Language Processing Techniques.

Authors: Shubham Bhor, Harish Shinde, Vivek Gupta, Vishak Nair.

Published Year: 2021

Observations:

- The suggested methodology uses Natural Language Processing, Ranking Algorithm, and Optical Character Recognition (OCR) to extract data from resumes and rate them according to particular firms.
- By obtaining information from social media sites like LinkedIn and using it to draw in qualified candidates from other areas, the intention is to simplify and optimize the hiring process.
- Its objectives are to process resumes from various websites and applications, increase the resume dataset, boost system speed, and add psychometric tests to increase adaptability.
- Elastic Search is used by the system to score and rank resumes according to HR requirements, give a proportionate boost to each individual trait, and provide HR with a final sorted list of applicants.

Shortcomings:

- The use of OCR for data extraction is mentioned in the text, but it makes no mention of any potential drawbacks or difficulties with the technology, such as problems with scanned documents' accuracy or formatting changes.
- By classifying resumes according to technical abilities and gathering information from social media, the system seeks to expedite the hiring process. However, it ignores potential biases in the data extraction or automated rating algorithms.
- The part on future scope talks about adding psychometric testing and analyzing resumes from other sources, but it doesn't go into detail about how these additions would affect the system's overall efficacy or user experience.
- Elastic Search is used in passing throughout the text to score and arrange resumes, but it doesn't go into detail on how the system manages sophisticated searches, protects the privacy and security of user data, or deals with potential biases in the scoring procedure.

8) Survey Paper on Resume Building Application.

Authors: Kishor Raut, Suhas Dalve, Mahesh Jadhav, Harish Koli.

Published Year: January 2022.

Observations:

- Extensive modular structure: The administration, faculty, students, and resume production modules comprise the four primary modules of the system, which offer a well-defined structure for handling student interactions and placement operations.
- User experience is prioritized: The emphasis on giving students access to placement-related information and an intuitive resume builder tool suggests that system design has taken a user-centric approach.
- Real-time notification integration: Including tools to alert students to forthcoming events and activities, such as the Placement Calendar, shows that the system takes a proactive approach to informing and engaging users.

Shortcomings:

- Absence of comprehensive information regarding the technical setup of the system: There is a paucity of precise technical information regarding the system's development process utilizing the MERN stack technologies, despite the system's methodology and modules being described.
- Brief justification for the Applicant Tracking System (ATS) integration: The ATS is mentioned in passing, and no details are provided regarding how it is incorporated into the resume builder system to guarantee compliance with ATS regulations.
- Lack of information about user testing and feedback: The sections fail to address the need of include user testing and feedback methods in the development process in order to improve the system based on user demands and experiences.

9) Resume Builder Application.

Authors: Rinki Tyagi, Nihal Singh, Akanksha Bhagel , Ankita Singh.

Published Year: May 2020

Observations:

- All of the sections clearly highlight the importance of simplifying the resume creation process and offering an intuitive interface.
- Taking into account the drawbacks and difficulties of the current manual approaches, the necessity for a more effective and automated resume creation system is emphasized.
- It is emphasized again how important it is to keep your resume structure professional and succinct, emphasizing the most important elements and omitting the rest.

Shortcomings:

- It is said that the current method of manually preparing resumes using Google Docs or Word is error-prone, time-consuming, and tiresome.
- The lack of a systematic sequence and the difficulty in connecting transactions to contexts make it difficult to maintain and retrieve information in the current system.
- The manual procedure results in time wastage, makes it harder to identify errors, and presents difficulties when it comes to amending records once they are recorded.

10) Resume Builder System Using Full Stack Web Development

Authors: Sakshi Jadhav, Shreya Kawade, Siddhesh Chikhale.

Published Year: May 2023

Observations:

- The technology streamlines procedures and increases placement efficiency by giving automation priority in areas like application monitoring and resume generation.
- It combines several components, including opportunities, noticeboard, dashboard, and resume building, to provide a complete solution for managing placement activities.
- The system's user-centric design enhances user experience and engagement through features like easily adjustable templates, visual data representation, and intuitive interfaces.

Shortcomings:

- Important information regarding data privacy is missing from the text: security precautions to safeguard private student and college data in the resume builder system.
- There isn't much information available about user training, which is crucial for successful system uptake and use among college staff and students.
- The templates in the proposed system might not match ATS criteria and have restrictions similar to those in current software. It's crucial to make sure the templates are adaptable and suitable.

11) Resume Builder Web Application.

Author: Snehal Vijay Patil

Published Year: June 2023

Observations:

- Simple to Use: The applet is easy to use, doesn't require registration, and lets you quickly update and modify resumes.
- User-Friendly Interface: The application provides a user-friendly interface that simplifies the task of creating a resume, making it accessible even to the users who are not well-versed in resume writing.
- Structured Resume Creation: The system guides users through the resume creation process by requiring input in predefined fields (personal information, work experience etc,) ensuring that all necessary information is included in a well-structured format.

Shortcomings:

- Mobile optimization is not mentioned in the system, which is noteworthy considering the increase in mobile job applications and browsing.
- It ignores accessibility features that are essential to an inclusive user experience and for people with disabilities.
- Certain sections, such as Testing and User Feedback, are repeated, which could cause confusion and repetition.
- Lack of specific data security procedures and controls may harm the application's trustworthiness.
- Specific ideas of user experience design, such journey mapping and user personas, are not well explained.
- Considering the significance of CI/CD approaches in software development, it is possible that their exclusion from the text was a mistake.
- The integration of AI technologies, which could improve the functionality of resume processing and analysis, is not mentioned.

12) A Review Paper on Resume Portal.

Authors: Khushubu Dipakrao Ingale, Samruddhi Anil Nirmal, Prachi Padmakar Kamble, Meghana Kashyap, SunilKumar Pandey, Shruti Sanjay Nehulkar.

Published Year: 2021

Observations:

- The focus of the labor market is on technology orientation.
- The value of an online CV that is tech aware.

- The benefit of having an online resume in terms of competition.
- The understanding that a resume serves as a job applicant's initial impression.
- Resumes must be eye-catching and successful in order to impress interviewers.

Shortcomings:

- The current employment platforms do not offer a subdomain capability for resumes.
- Inadequate mechanisms for alerts regarding resume viewing.
- On most portals, it is impossible to see who has visited one's profile.
- It's challenging to get in touch with HR directly via the current platforms.
- Even in the digital age, institutions still handle student resumes manually.

13) Resume Builder

Authors: Aditya Paliwal, Aman Khan, Aman Kumawat

Published Year: November 2022

Observations:

- Automated Resume Creation: The project's goal is to offer a platform for students to use a standardized format for building and updating their resumes. Students' resume-building process can be streamlined and human labor can be greatly reduced with the help of automation.
- Compatibility and Accessibility: The project's created website works with desktop and mobile browsers on any Windows operating system, and it is usable by both non-students and college students. The platform's usefulness and reach may be improved by this widespread accessibility.

Shortcomings:

- Absence of Database Integration: The project covered in the journal does not include a database made especially to assist universities in efficiently maintaining and organizing student data. This could be a serious hindrance to the structure and administration of data.
- Restricted Faculty Involvement: According to the system outlined in the journal, faculty members are not involved in managing or altering student data anyway.
- This can make it more difficult for instructors to supervise and offer advice on career development and resume writing.

Chapter 4

Proposed Model, Module Description and UML Diagrams

When there is fierce competition for a job, we must possess the abilities that the employer is looking for in order to get hired. However, in addition to having skills, we also need to demonstrate our abilities. The recruiter must comprehend our abilities and talents in order to offer you a position, so even if we are unable to communicate vocally, we may do so by putting them on paper in the form of a resume. We must include all of our personal information, professional background, accomplishments, and completed projects in the paper. However, one method of interview preparation is through resume. But in this section, we have to use a Word document to make a resume. This will take a lot of time and effort, and you won't know what to put in. It is undesirable since it contains errors and will reflect poorly on your profile when we present it to the interviewer.

Thus, in order to make a good impression on the interviewer, you need an application that can save time, minimize human error, and offer resume advice that will help you advance. On our website, you can download any templates we provide, as well as templates you can download from other websites. It will immediately add words and alter the text when you fill in the relevant forms on the provided page, ensuring that the information fits inside the template. A video explaining how to utilize our website is also available, along with the user interface. Depending on your needs, you can also download it in a variety of formats and it is also very structured. All of these possibilities are available on our website, allowing you to focus on your career and interview preparation.

4.1 Modules:

4.1.1 Homepage Module:

The home page is the first page of our Resume Builder Website. In this page, we have a header where we have the options of Sign Up and Login. It showcases the actual motto of the website. It showcases some of the templates of the resumes available. So that the users can view the templates and can get idea of what the website offers for them.

4.1.2 Login and Registration Module:

In this module, the user enter the details for registration. The details include username, email and password. The credentials are stored in the database at server end. When the registered user wants to use our website again, he can just login with the registered credentials. And then, the user will go through the actual process- first- the template selection and then the Resume Creation.

4.1.3 Template Selection Module:

In this module, the users have the choice to select a template among the given list of templates. They can view the preview of the templates for better understanding about the template. And, then they can choose the one they find apt for their requirements.Then, they are redirected to the next module, where they enter the information to be filled in the resume.

4.1.4 Filling Information Module:

This is the most important module in the website. In this module, the user enter all the information required in the given form. The user had to enter his personal information at first, then the professional information and at last, the contact information.

4.1.5 Final Correction Module:

It can be considered the last module. After filling out the information, the user then has the freedom to edit the information again by viewing how the information is changing on the resume live. And then, when the user feels that the resume editing is completed, he can download the resume in .PDF format.

4.2 UML Diagrams:

4.2.1 System Architecture:

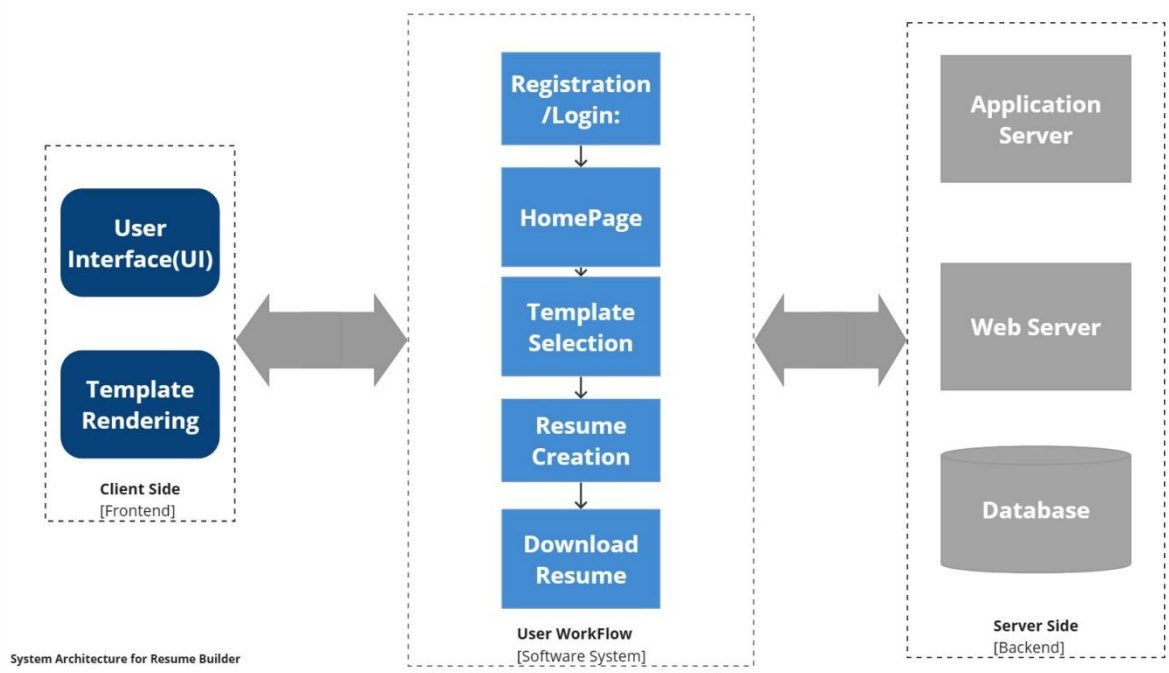

Fig 1. System Architecture

The architecture of the system for the Resume Builder is classified into three major components: Client Side (Frontend), User Workflow (Software System), and Server Side (Backend). The User Interface (UI) for the Client Side of the software system contains registration/login pages, the main homepage, resume templates, and forms needed to interact with the system. Template rendering manages the display of these templates and user-inputted information.

User Workflow: The users can register or log in, visit the homepage, choose a resume template, input their personal/professional information to create a resume, and finally download the created resume in PDF or DOCX format.

On the Server Side: An Application Server processes the HTTP requests and distributes those to the designated backend services. A Web Server holds user sessions, authentication, and validation of user inputs. The Database stores user profiles, resume data, and template

designs—CRUD operations can be carried out on this data. This ensures a seamless and secure user experience from resume creation to download.

4.2.2 Use Case Diagram

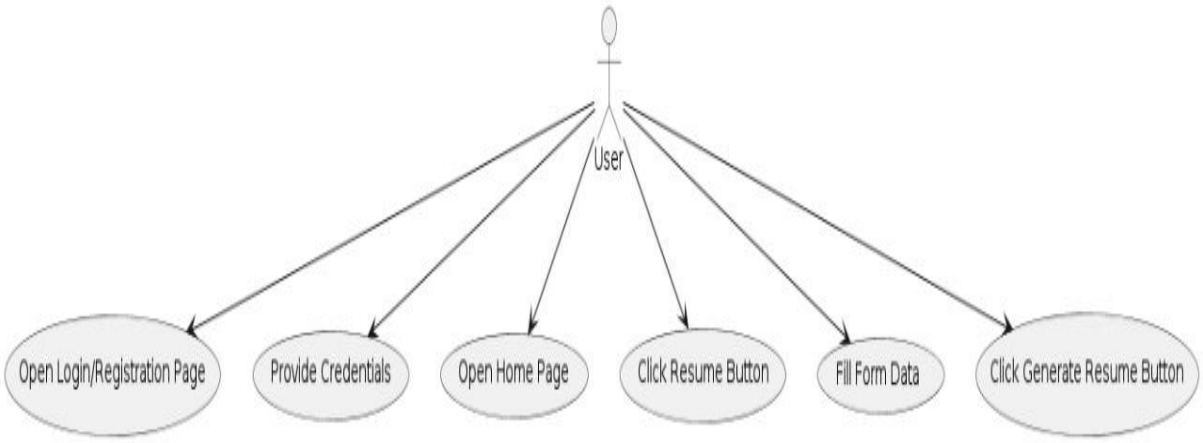

Fig 2. Use Case Diagram

This Use Case Diagram depicts the inputs of the process of a user and system for resume generation. The leading actor in the diagram is the "User," and he does quite a few behaviors as a part of the use case. A user first opens the login or registration page. Then, a user gives his credentials to get entered into the system. After getting entered, the user will navigate to the homepage. The user would click the resume button from the homepage to start creating their resume. Then, the user would enter the form data and finally click on "Generate Resume" to get their resume created and downloaded.

This diagram clearly shows a sequence of actions that a user needs to complete to have their resume generated; it highlights the user interaction flow steps that are of crucial importance. Here, each oval reflects a specific use case, capturing the key functionalities that the system provides to the user. The arrows capture the direction of the interaction, making it clear from the user, which will be the journey for a user through the system.

4.2.3 Class Diagram

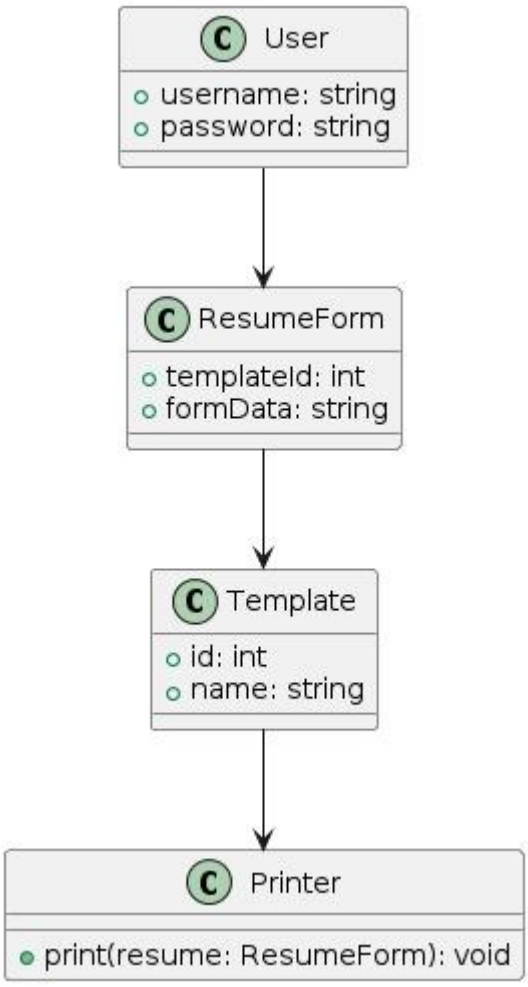

Fig 3. Class Diagram

This Class Diagram depicts the structure of the resume generator system; the main classes and their relations are shown. There are four main classes: User, ResumeForm, Template, and Printer.

User: This is the entity of the system, represented by its characteristics such as the string username and password. These are implemented through the User class to handle user authentication and management.

ResumeForm: The class represents the form which the user fills in to create a resume. It has attributes of template, an integer, and formData, a string, holding the ID of the chosen resume template and the actual data entered by the user, respectively.

Template: This class describes the details of a résumé template. It carries an attribute id, which is an integer, and a name, which is a string. Combining both can uniquely identify a template, whereas a name can describe its name.

Printer: This class is responsible for the output of the resume. This class contains a method, print, which has only one argument, a type of ResumeForm, and returns nothing. Hence, its mission primarily processes the resume form data for output printing. Arrows show the relationships between classes and interactions flowing data and control within the system. This diagram gives a clear overview of how different components in the system are designed and interact with one another, giving the resume-generating functionality.

4.2.4 Sequence Diagram

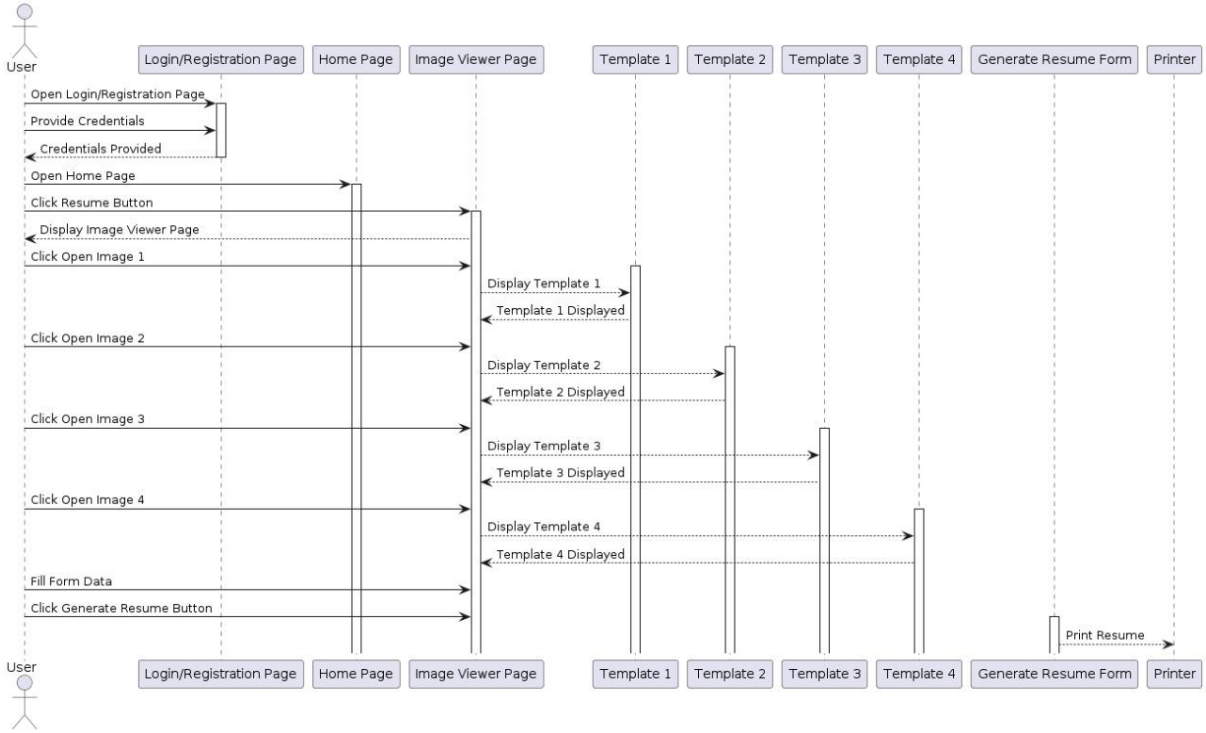

Fig 4. Sequence Diagram

The following is a Sequence Diagram that describes how a user interacts with a resume generation system and outlines the series of actions and events that occur from a user log-in to a system up to the point at which a user will print the resume. Since then, the user is expected to open a login or registration page and provide his credentials; after that, he is expected to receive a home page. Upon opening the home page, they click the resume button, which displays the image viewer page where many resume templates are present.

In the image viewer page, the user clicks subsequently to open and view many existing templates (Template 1, 2, 3, etc.). Every click causes the system to project the type of template being referred to, hence a clue to the user that he is now in a position to see the template. The user looks through the available templates, fills in the necessary form data, and clicks the "Generate Resume" button. Once the data is filled in, the system prepares the resume in a layout generated according to the selected template. Then, it sends the resume generated to the printer. The printer class receives the data of the form and prints the resume. This diagram captures the step-by-step interaction flow between the user and the system components, indicating the most critical processes in template selection, filling in the data, and generating the final resume document for printing.

4.2.5 Component Diagram

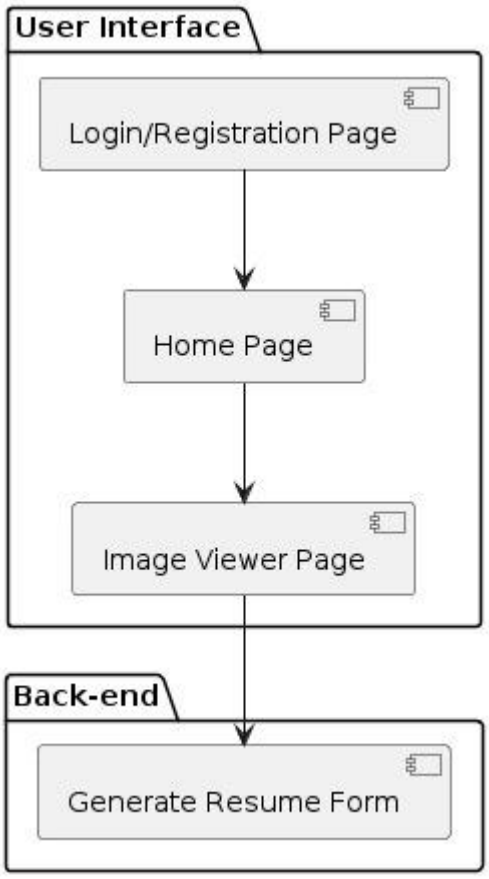

Fig 5. Component Diagram

The component diagram below describes the project structure with front-end (User Interface) and back-end components. It describes the user interface containing the Login/Registration Page, Home Page, and Image Viewer Page. A user begins interacting with the system at the Login/Registration Page to log in or register into the system. After logging in or registering, a user is taken to the Home Page. On the Home Page, a user can navigate to an Image Viewer Page, which probably contains image-viewing functionalities with interactions.

The Generate Resume Form service or something from the back-end part, in which all front-end pages, mainly Image Viewer Page, can be called to generate a resume form. This interaction helps in suggesting the workflow that users might be authenticated at first, then viewing images of probably documents or profiles, and finally using those images to fill up a resume form.

Chapter 5

Implementation, Experimental Results and Test Cases

5.1 Implementation

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Resume Builder</title>
    <link rel="stylesheet" href="home.css">
</head>
<body>
    <!-- Header Section -->
    <header>
        <img src="https://i.ibb.co/jTMW8gM/logo.png" alt="Logo" class="logo">
        <nav>
            <ul>
                <li><a href="signup_login.html" class="btn">Sign Up</a></li>
                <li><a href="signup_login.html" class="btn">Login</a></li>
            </ul>
        </nav>
    </header>

    <!-- Hero Section -->
    <section class="hero">
        <div class="hero-content">
            <h1>The Online Resume Builder</h1>
            <p>Easily create the perfect resume for any job using our best-in-class resume builder
platform.</p>
            <a href="templates.html" class="cta">Create My Resume Now</a>
        </div>
        <div class="hero-slider">
            <div class="slides">
                <div class="slide active">
                    <img src="images/template1.png" alt="Template 1">
                </div>
                <div class="slide">
                    <img src="images/template2.png" alt="Template 2">
                </div>
                <div class="slide">
                    <img src="images/template3.png" alt="Template 3">
                </div>
                <div class="slide">
                    <img src="images/template4.png" alt="Template 4">
                </div>
            </div>
        </div>
    </section>
```

```
    <!-- Templates Showcase Section -->
    <section class="templates-showcase">
        <h2>Get the Best Templates</h2>
        <div class="templates-slider">
            <div class="template-slide">
                <img src="images/template1.png" alt="Template 1">
            </div>
```

```
            <div class="template-slide">
                <img src="images/template2.png" alt="Template 2">
            </div>
            <div class="template-slide">
                <img src="images/template3.png" alt="Template 3">
            </div>
            <div class="template-slide">
                <img src="images/template4.png" alt="Template 4">
            </div>
        </div>
    </section>
```

```
    <!-- Footer Section -->
    <footer>
        <p>&copy; 2024 Resume Builder. All rights reserved.</p>
    </footer>
```

```
    <script src="scripts.js"></script>
</body>
</html>
```

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Resume Builder</title>
    <link rel="stylesheet" href="signup_login.css">
</head>
<body>
    <div class="container">
        <div class="tabs">
            <button class="tablinks active" onclick="openTab(event, 'signup')">Signup</button>
            <button class="tablinks" onclick="openTab(event, 'login')">Login</button>
        </div>

        <div id="signup" class="tabcontent" style="display: block;">
            <h2>Signup for Resume Builder</h2>
            <form action="signup.php" method="POST">
                <label for="username_signup">Username:</label><br>
                <input type="text" id="username_signup" name="username_signup" required><br><br>

                <label for="email_signup">Email:</label><br>
                <input type="email" id="email_signup" name="email_signup" required><br><br>

                <label for="password_signup">Password:</label><br>
                <input type="password" id="password_signup" name="password_signup" required><br><br>

                <button type="submit">Signup</button>
            </form>
        </div>
```

```
        <div id="login" class="tabcontent">
            <h2>Login to Resume Builder</h2>
            <form id="loginForm" onsubmit="return validateLogin()">
                <label for="username_login">Username:</label><br>
                <input type="text" id="username_login" name="username_login" required><br><br>
```

```
                <label for="password_login">Password:</label><br>
                <input type="password" id="password_login" name="password_login" required><br><br>

                <button type="submit">Login</button>
            </form>
        </div>

        <script>
            function openTab(evt, tabName) {
                var i, tabcontent, tablinks;
                tabcontent = document.getElementsByClassName("tabcontent");
                for (i = 0; i < tabcontent.length; i++) {
                    tabcontent[i].style.display = "none";
                }
                tablinks = document.getElementsByClassName("tablinks");
                for (i = 0; i < tablinks.length; i++) {
                    tablinks[i].className = tablinks[i].className.replace(" active", "");
                }
                document.getElementById(tabName).style.display = "block";
                evt.currentTarget.className += " active";
            }

            function validateLogin() {
                var username = document.getElementById("username_login").value;
                var password = document.getElementById("password_login").value;

                if (username === "csef10" && password === "griet") {
                    window.location.href = "templates.html";
                    return false; // Prevent default form submission
                } else {
                    alert("Invalid username or password.");
                    return false; // Prevent form submission
                }
            }
        </script>
</body>
</html>
```

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Choose Template - Resume Builder</title>
    <link rel="stylesheet" href="templates.css">
</head>
<body>
    <header>
        <h1>Choose a Template</h1>
    </header>

    <main class="template-gallery">
        <div class="template">
            <img src="images/template1.png" alt="Template 1">
            <button class="preview-btn">Preview</button><br>
            <button class="finalize"
onclick="finalizeTemplate('form/template1.html')">Finalize</button>
        </div>
        <div class="template">
            <img src="images/template2.png" alt="Template 2">
            <button class="preview-btn">Preview</button><br>
```

```
            <button class="finalize"
onclick="finalizeTemplate('form/template2.html')">Finalize</button>
        </div>
        <div class="template">
            <img src="images/template3.png" alt="Template 3">
            <button class="preview-btn">Preview</button><br>
            <button class="finalize"
onclick="finalizeTemplate('form/template3.html')">Finalize</button>
        </div>
        <div class="template">
            <img src="images/template4.png" alt="Template 4">
            <button class="preview-btn">Preview</button><br>
            <button class="finalize"
onclick="finalizeTemplate('form/template4.html')">Finalize</button>
        </div>
        <div class="template">
            <img src="https://i.ibb.co/GM2hysG/template-5.png" alt="Template 5">
            <button class="preview-btn">Preview</button><br>
            <button>Select Template</button>
        </div>
        <div class="template">
            <img src="https://i.ibb.co/VjDNXH1/template-6.png" alt="Template 6">
            <button class="preview-btn">Preview</button><br>
            <button>Select Template</button>
        </div>
        <div class="template">
            <img src="https://i.ibb.co/tbkC2LG/template-7.png" alt="Template 7">
            <button class="preview-btn">Preview</button><br>
            <button>Select Template</button>
        </div>
        <div class="template">
            <img src="https://i.ibb.co/0sNSPqV/template-8.png" alt="Template 8">
            <button class="preview-btn">Preview</button><br>
            <button>Select Template</button>
        </div>
      <div class ="space">

      </div>
    </main>
    <div id="previewModal" class="modal">
        <span class="close">&times;</span>
        <img class="modal-content" id="previewImage">
    </div>
    <footer>
        <p>&copy; 2024 Your Company. All rights reserved.</p>
    </footer>
    <script>
        // Get the modal
        var modal = document.getElementById("previewModal");

        // Get the image and insert it inside the modal
        var img = document.getElementById("previewImage");
        var modalImg = document.getElementsByClassName("modal-content")[0];
        var previewBtns = document.getElementsByClassName("preview-btn");
```

```
        // Loop through all preview buttons and add the onclick event
        for (var i = 0; i < previewBtns.length; i++) {
            previewBtns[i].onclick = function() {
                modal.style.display = "block";
                var imgSrc = this.previousElementSibling.src;
                modalImg.src = imgSrc;
```

```
            }
        }
```

```
        // Get the <span> element that closes the modal
        var span = document.getElementsByClassName("close")[0];
```

```
        // When the user clicks on <span> (x), close the modal
        span.onclick = function() {
            modal.style.display = "none";
        }
        function previewTemplate(imageUrl) {
            sessionStorage.setItem('previewImage', imageUrl);
            window.open('preview.html', '_blank');
        }
```

```
        function finalizeTemplate(formUrl) {
            localStorage.setItem('finalizeForm', formUrl);
            window.location.href = 'personal.html'; // Redirect to the contact page
        }
    </script>
</body>
</html>
```

5.2 Experimental Results:

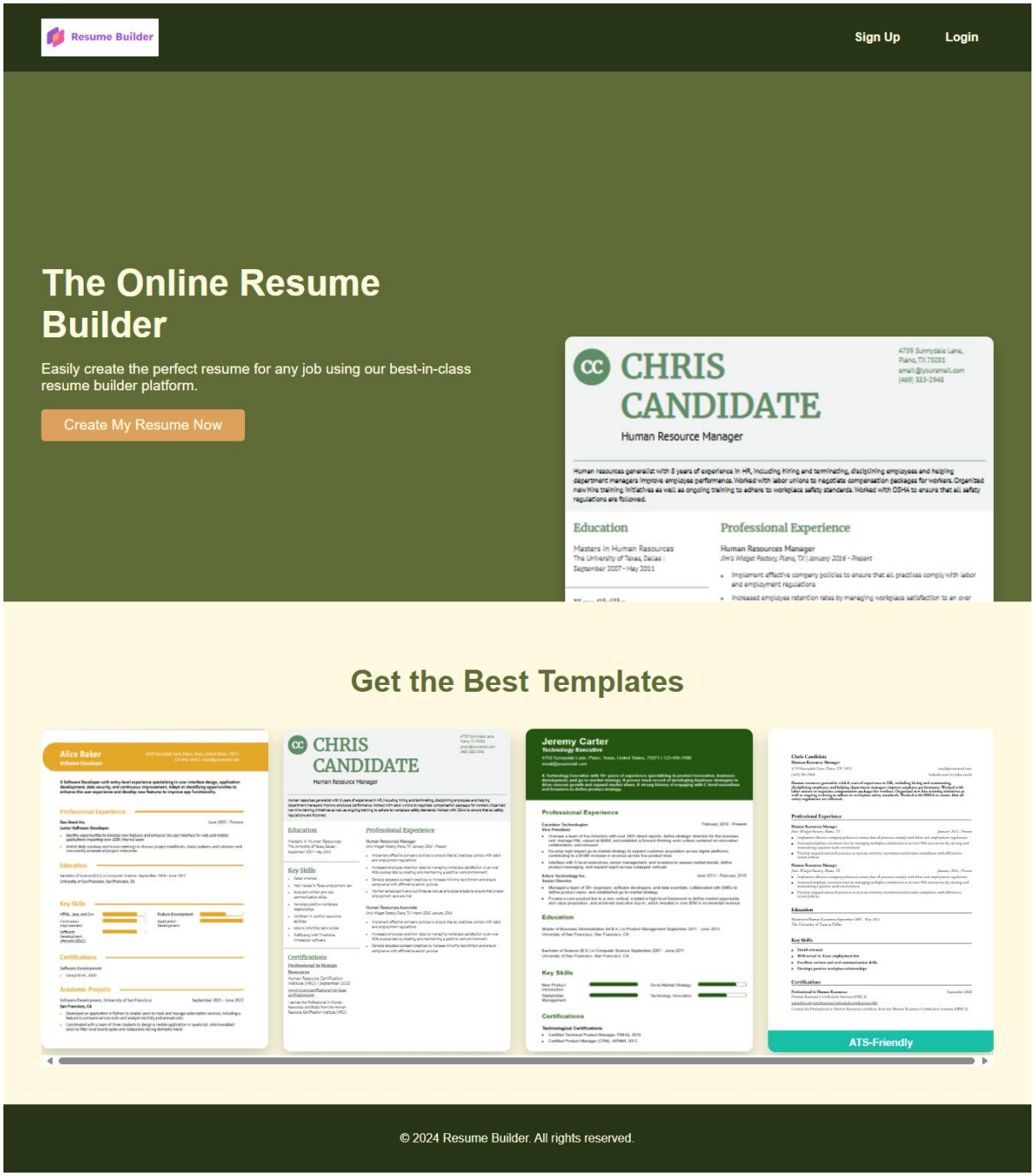

Fig 6. HomePage

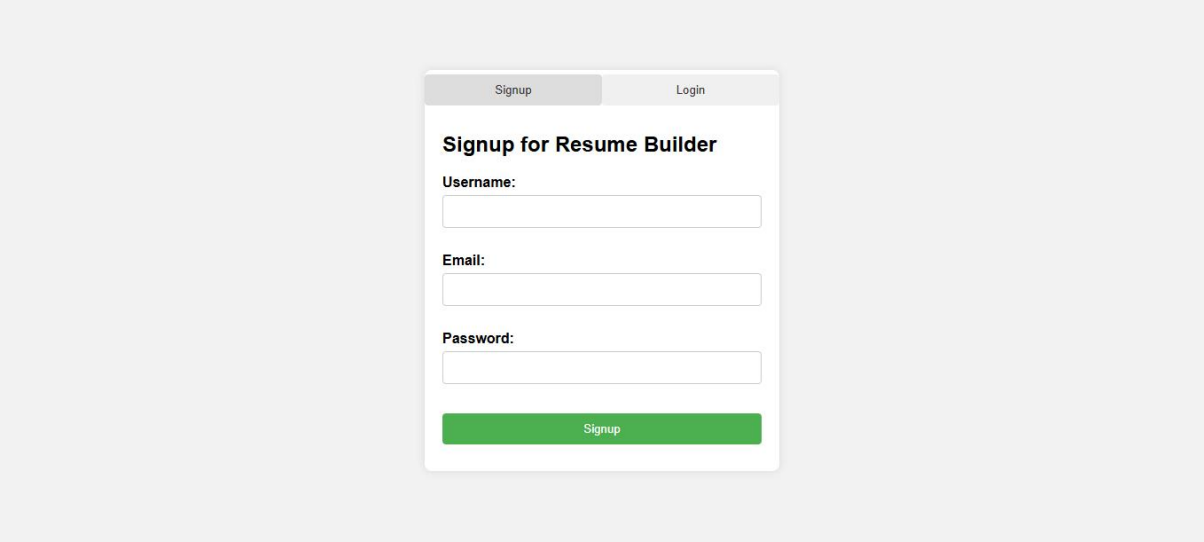

Fig 7. SignUp Page

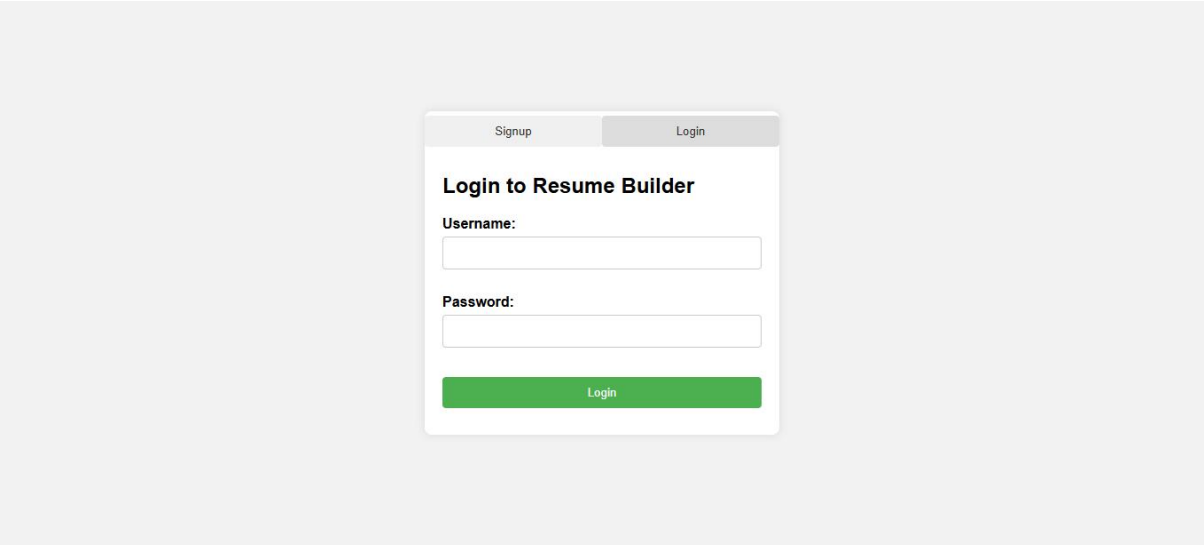

Fig 8. Login Page

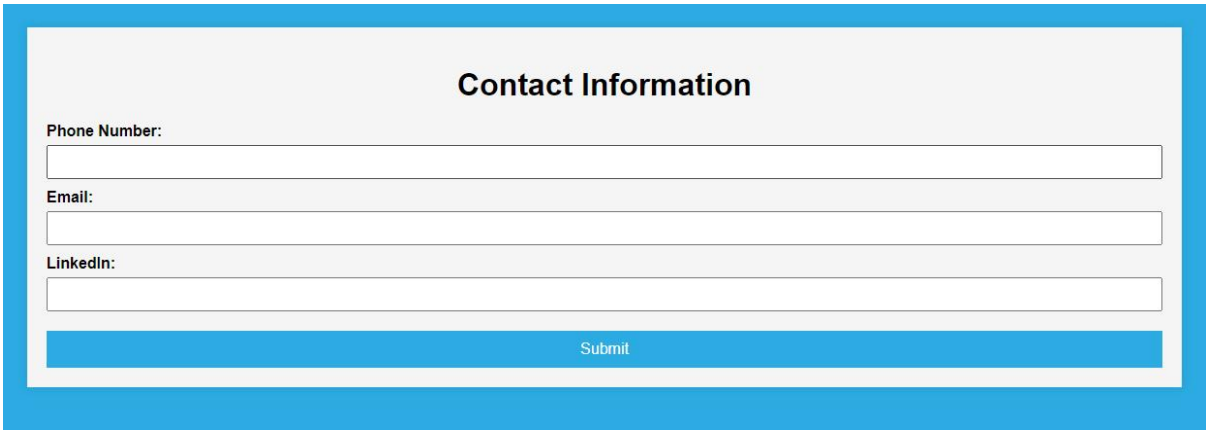

Fig 9. Contact Info Form Page

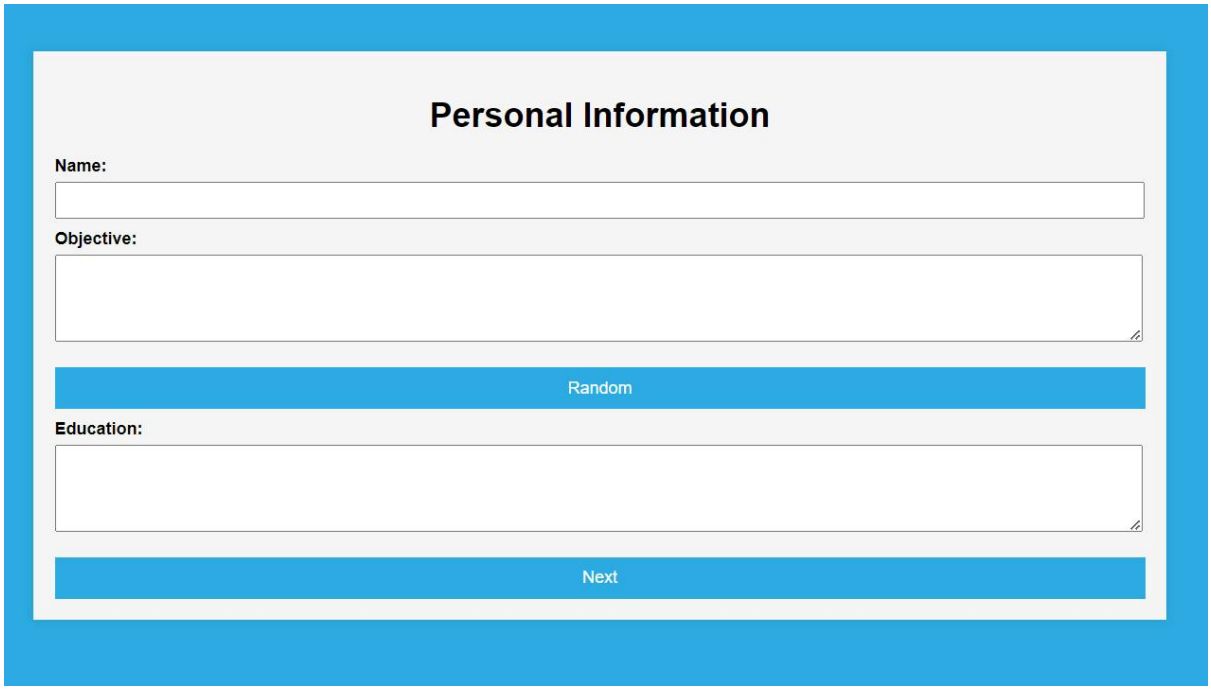

Fig 10. Personal Info Form Page

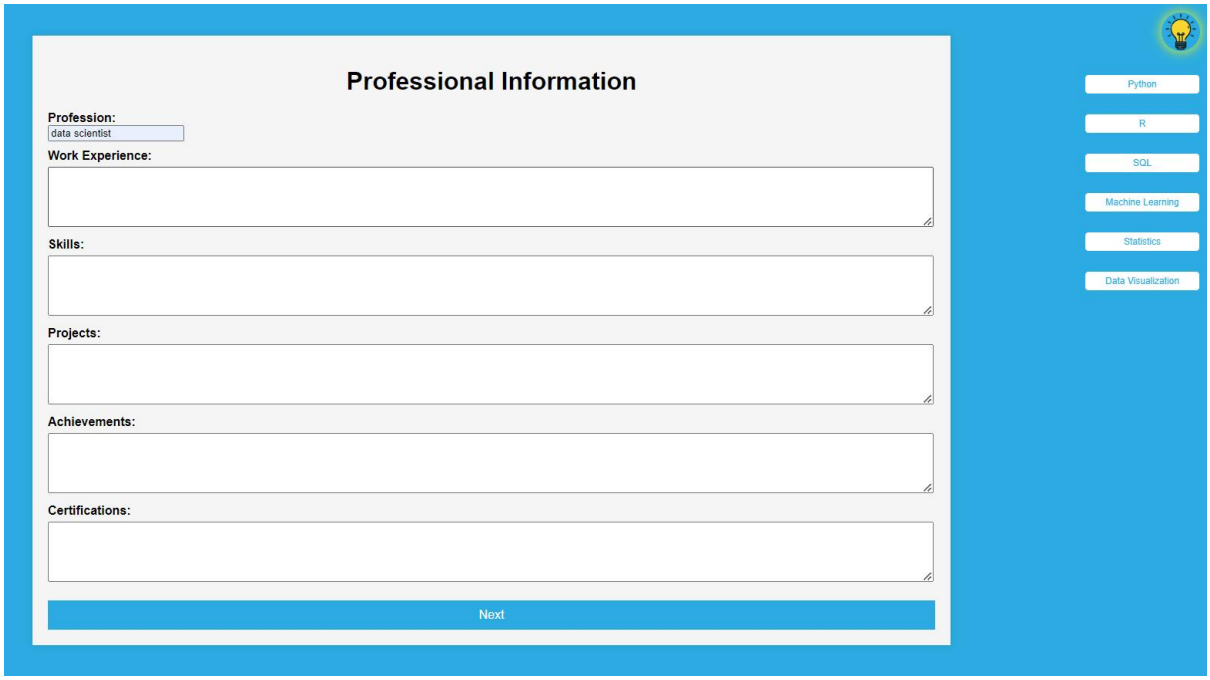

Fig 11. Professional Info Form Page

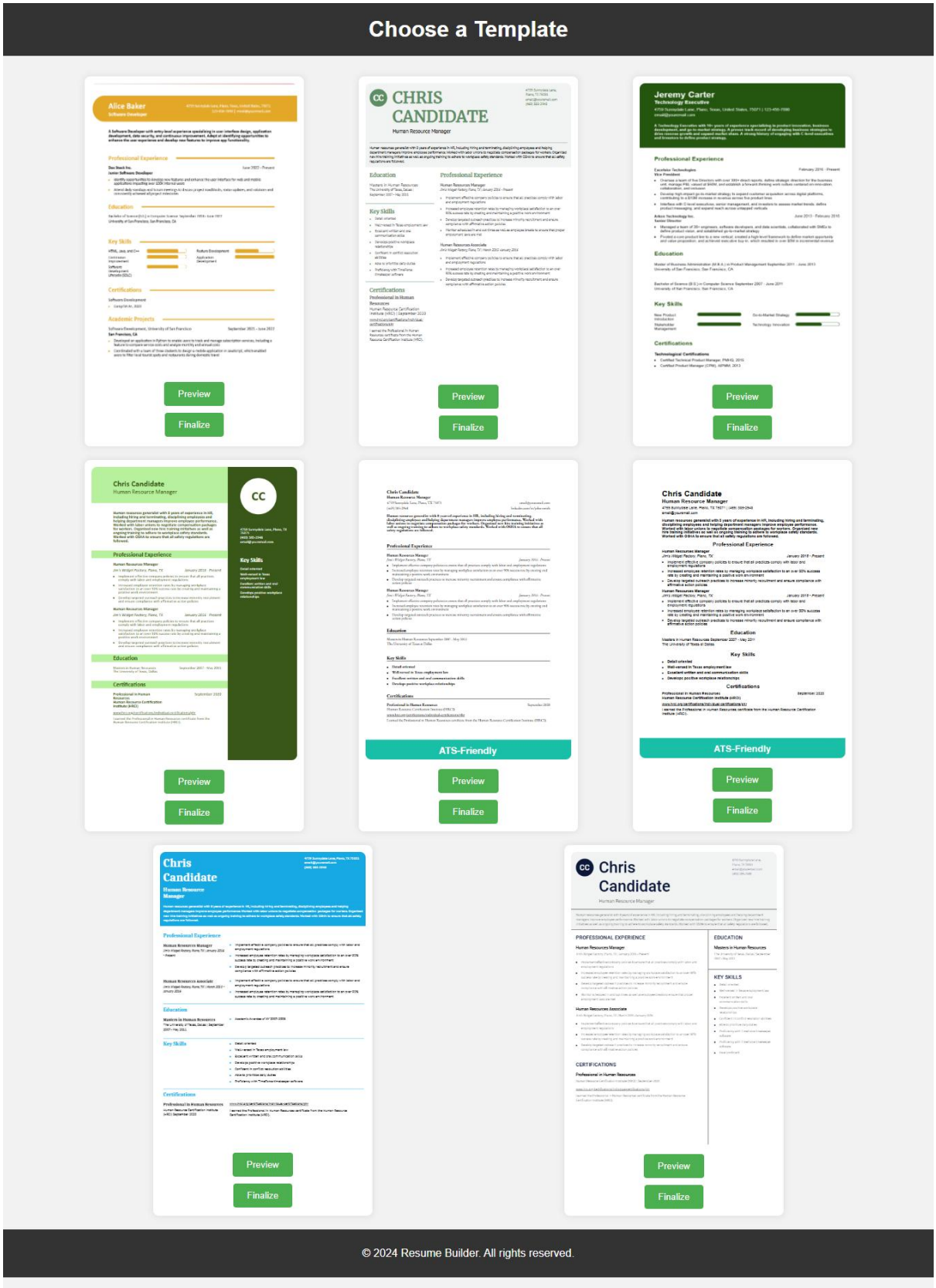

Fig 12. Template Selection Page

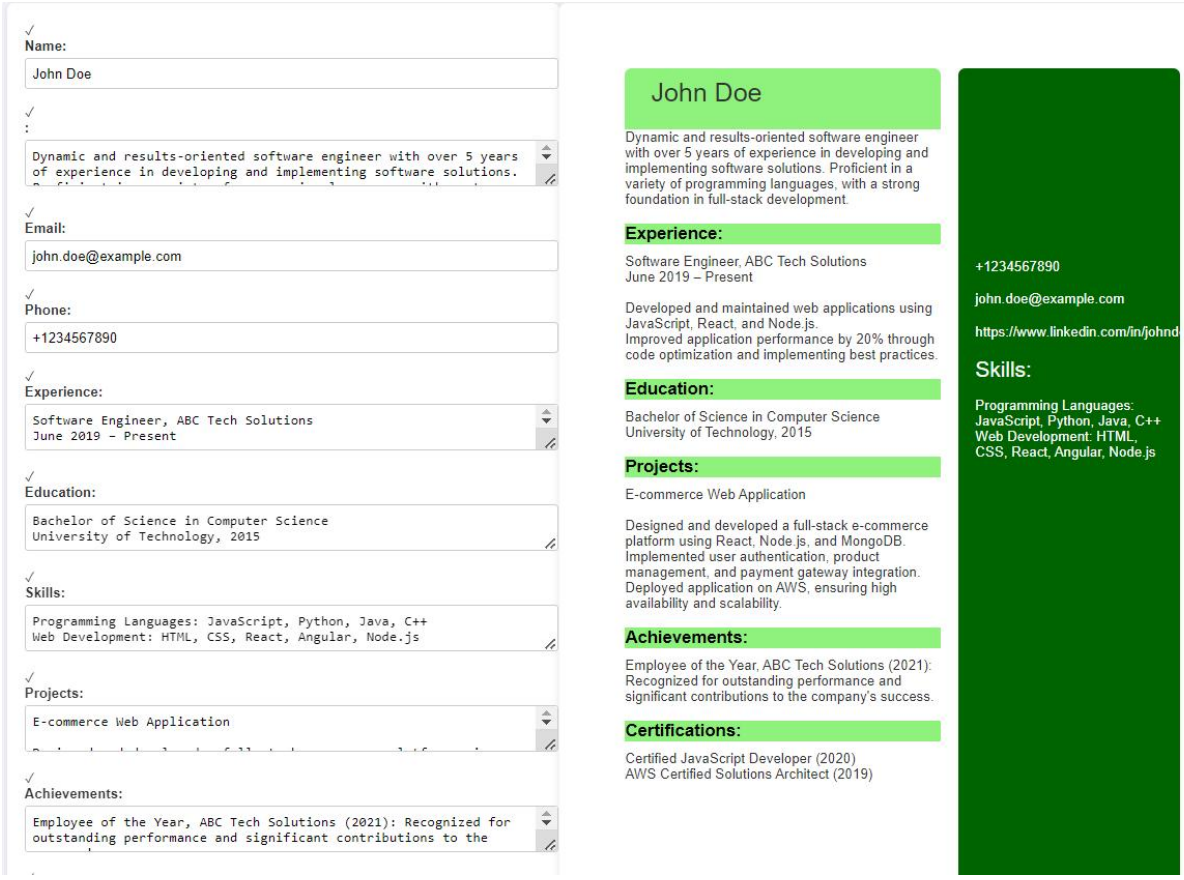

Fig 13. Final Correction Page

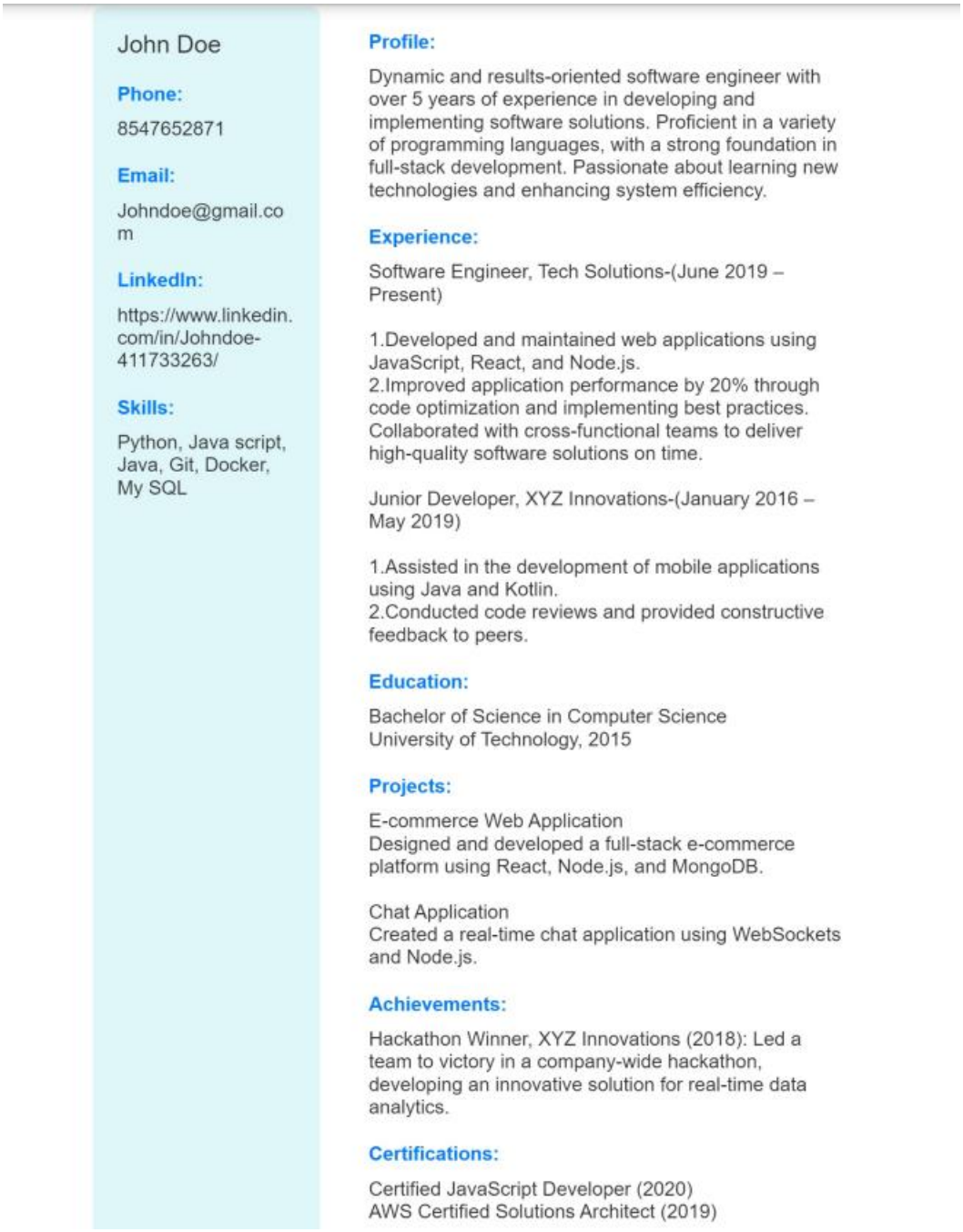

Fig 14. Template 1

John Doe

8456652875
john.doe@example.com
https://www.linkedin.com/in/johndoe

Summary:

Dynamic and results-oriented software engineer with over 5 years of experience in developing and implementing software solutions. Proficient in a variety of programming languages, with a strong foundation in full-stack development.

Education:

Bachelor of Science in Computer Science
University of Technology, 2015

Skills:

Programming Languages: JavaScript, Python, Java, C++
Web Development: HTML, CSS, React, Angular, Node.js
Database Management: MySQL, PostgreSQL, MongoDB

Certifications:

Certified JavaScript Developer (2020)
AWS Certified Solutions Architect (2019)

Experience:

Software Engineer, Info Tech Solutions
June 2019 – Present

Developed and maintained web applications using JavaScript, React, and Node.js.
Improved application performance by 20% through code optimization and implementing best practices.

Projects:

E-commerce Web Application
Designed and developed a full-stack e-commerce platform using React, Node.js, and MongoDB.

Chat Application
Created a real-time chat application using Web Sockets and Node.js.

Achievements:

Hackathon Winner, XYZ Innovations (2018): Led a team to victory in a company-wide hackathon, developing an innovative solution for real-time data analytics.

Fig 15. Template 2

Fig 16. Template 3

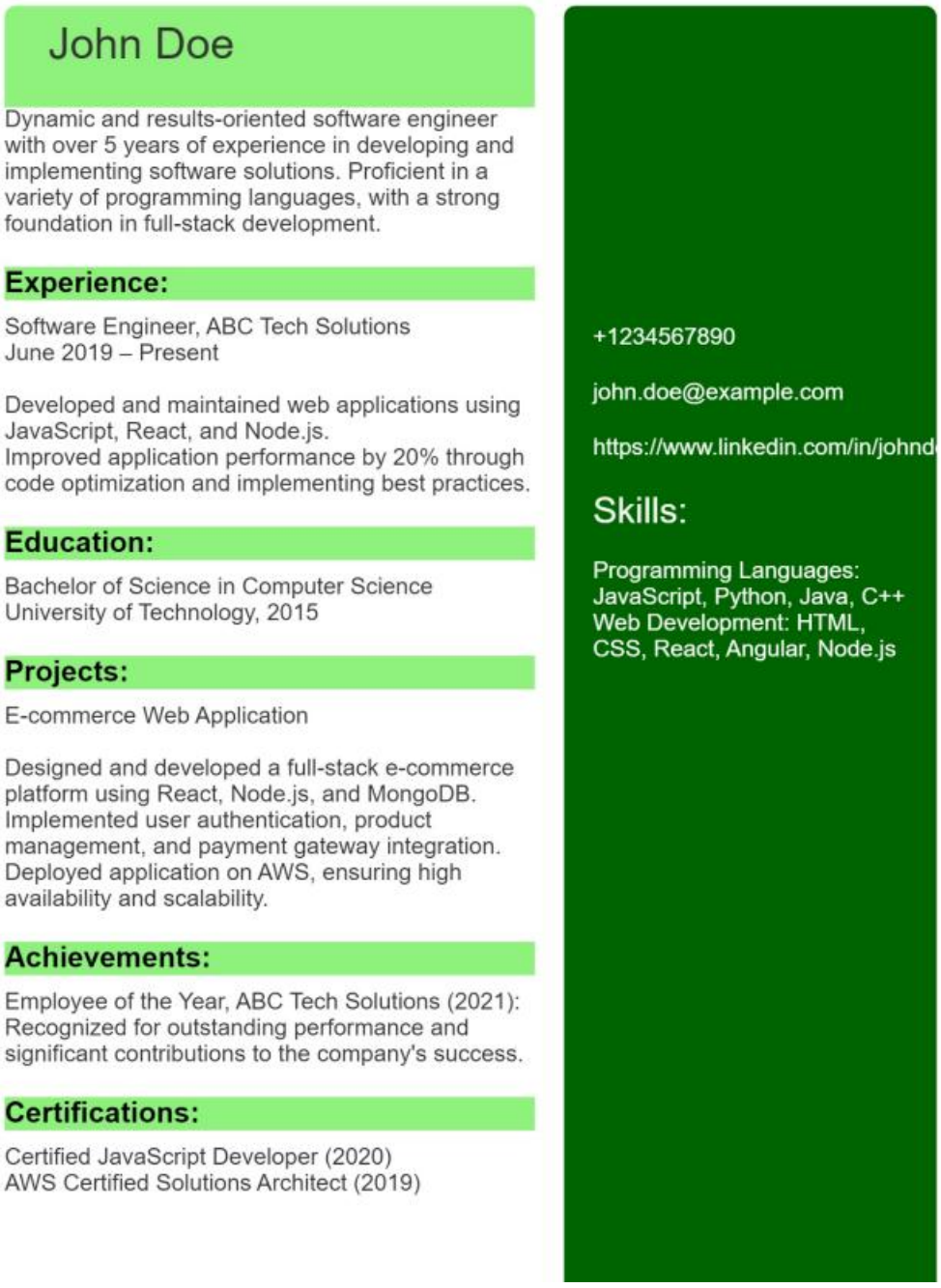

Fig 17. Template 4

John Doe

Dynamic and results-oriented software engineer with over 5 years of experience in developing and implementing software solutions. Proficient in a variety of programming languages, with a strong foundation in full-stack development.

Experience:

Software Engineer, ABC Tech Solutions
June 2019 – Present

Developed and maintained web applications using JavaScript, React, and Node.js.
Improved application performance by 20% through code optimization and implementing best practices.

Projects:

E-commerce Web Application

Designed and developed a full-stack e-commerce platform using React, Node.js, and MongoDB.
Implemented user authentication, product management, and payment gateway integration.
Deployed application on AWS, ensuring high availability and scalability.

Achievements:

Employee of the Year, ABC Tech Solutions (2021): Recognized for outstanding performance and significant contributions to the company's success.

Certifications:

Certified JavaScript Developer (2020)
AWS Certified Solutions Architect (2019)

Skills:

Programming Languages: JavaScript, Python, Java, C++
Web Development: HTML, CSS, React, Angular, Node.js

Phone:

+1234567890

Email:

john.doe@example.com

Education:

Bachelor of Science in Computer Science
University of Technology, 2015

LinkedIn:

https://www.linkedin.com/in/johndoe

Fig 18. Template 5

John Doe
+1234567890
john.doe@example.com
https://www.linkedin.com/in/johndoe

Personal Information:

Summary:

Dynamic and results-oriented software engineer with over 5 years of experience in developing and implementing software solutions. Proficient in a variety of programming languages, with a strong foundation in full-stack development.

Education:

Bachelor of Science in Computer Science
University of Technology, 2015

Professional Information:

Experience:

Software Engineer, ABC Tech Solutions
June 2019 – Present

Developed and maintained web applications using JavaScript, React, and Node.js.
Improved application performance by 20% through code optimization and implementing best practices.

Projects:

E-commerce Web Application

Designed and developed a full-stack e-commerce platform using React, Node.js, and MongoDB.
Implemented user authentication, product management, and payment gateway integration.
Deployed application on AWS, ensuring high availability and scalability.

Skills:

Programming Languages: JavaScript, Python, Java, C++
Web Development: HTML, CSS, React, Angular, Node.js

Certifications:

Certified JavaScript Developer (2020)
AWS Certified Solutions Architect (2019)

Achievements:

Employee of the Year, ABC Tech Solutions (2021): Recognized for outstanding performance and significant contributions to the company's success.

Fig 19. Template 6

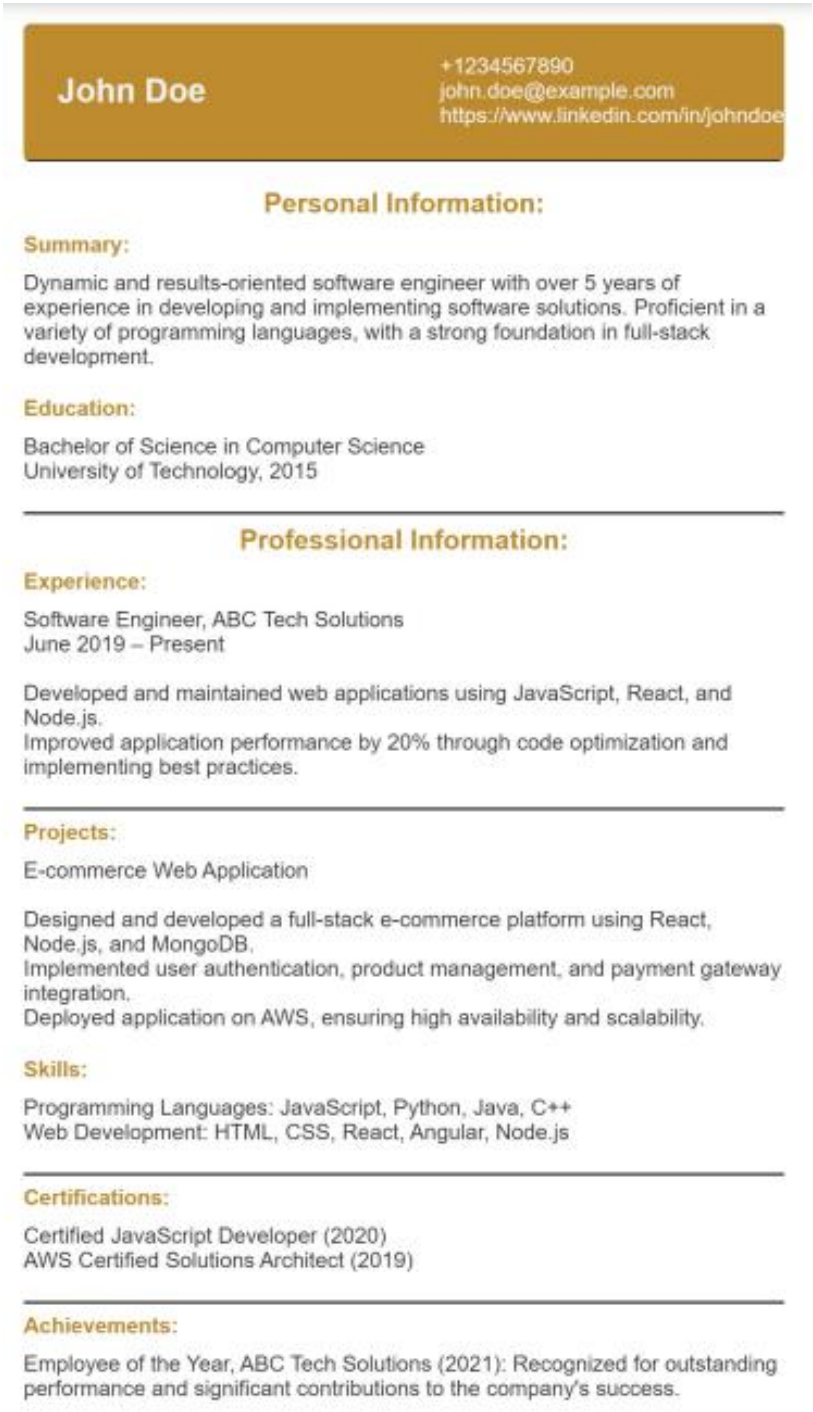

Fig 20.. Template 7

5.3 Test Cases:

Testcase ID	Test Scenario	TestCase	TestSteps	Expected Results	Actual Results	Status
1	New User	User Authentication	User Registration	Authentication of User	User Authenticated	Pass
2	Existing User login	Successful Login	User Login	Access Granted to user	Access Granted	Pass
3	Invalid Username/ Password	Wrong Credentials	Incorrect credentials entered	Access Decline to user	Access Granted	Fail
4	Invalid Username/ Password	Wrong Credentials	Incorrect credential entered	Access Decline to user	Access Declined	Pass
5	Not entering mandatory info in the form	Ignoring mandatory information	Not entering mandatory info and clicking 'Next'	No redirecting to next page until filling mandatory info	Not rediected to next page until mandatory info is filled	Pass

Table 1. TestCases

Chapter 6

Conclusion and Future Scope

6.1 Conclusion

Our project is to build a complete application for generating resumes. The fundamental essence of the same is to provide a smooth experience starting from the initial point of authentication through generating resumes. Users register and log in. They are then provided with the home page, where they can choose from multiple designs for their resume. The preview of these designs is visually available through an image viewer.

After template selection, the user inputs one's personal and professional details by filling out a form. After this, the system outlines the information and goes ahead to create the formatted document of a resume. The feature of handling more than one template is built into the system so that user inputs are managed effectively to bring out flexibility and customization.

Moreover, it contains features for secure user authentication, and data handling serves to protect sensitive information. It also consists of facilities for the easy printing of resumes developed and created so that printing hard copies for any purpose will be easily accessible to users.

In short, the project is aimed at developing a practical, user-friendly interface with a good backend processing capability to yield efficient, flexible, and reliable resume-generation solutions. All that the usability, security, and functionality of the application need to work toward is meeting all users' needs related to professional resume creation.

6.2 Future Scope:

1. Resume Ranking Driven by AI

AI analysis involves using keywords, experiences, and talents related to the job postings to evaluate resumes.

Including measures like the quantity of views, interactions, and endorsements a CV gets is known as popularity metrics.

Personalized Feedback: Giving job applicants comments on their resumes and making suggestions for enhancements to raise the score.

Dynamic Updates: Regularly revising resume rankings in response to changes in the labor market or the addition of new data.

2. AI Chatbot for Inquiries 24/7 Support: An AI-powered chatbot that is accessible 24/7 to respond to inquiries from employers and job seekers.

Quick Answers: Giving prompt answers to frequently asked questions on the platform, employment applications, and profile preferences.

Guided Assistance: Assisting users with navigating the platform and providing advice on how to prepare for interviews, build resumes, and search for jobs.

Feedback collection: Compiling user opinions to enhance chatbot functionality and user experience in general.

3. Data Encryption for Profile Security: To safeguard user privacy, make sure all personal data is encrypted and maintained safely.

Two-Factor Authentication: Making profile access subject to two-factor authentication adds an additional degree of protection.

Users can select who can view their personal information and how visible their profiles are thanks to privacy controls.

Frequent Audits: Finding and fixing possible vulnerabilities through frequent security audits.

4. Customized User Interface

Permit users to add widgets to their dashboards that display networking possibilities, career recommendations, application statuses, and advice on improving one's skills.

5. Themes and Layouts: Provide job seekers with a range of themes and layout choices so they may customize their resumes and profiles.

Users can utilize skill tags and highlights to draw attention to particular accomplishments or skills on their profiles.

6. Improving the platform's resume editing features can greatly enhance both the user experience and the caliber of resumes.

Chapter 7

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